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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,481	11/28/2000	Dave McDysan	RIC-000-42	7586

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EXAMINER	
BATES, KEVIN T	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/723,481	MCDYSAN ET AL.	
	Examiner	Art Unit	
	Kevin Bates	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7-14-2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to a communication made on June 10, 2004.

The Power of Attorney was received on June 28, 2004.

The Information Disclosure Statement was received on July 14, 2004.

Claims 1-50 are pending in this application

Response to Amendment

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7, 15-17, 22, 26-28, 30, 32, 39-41, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Nilakantan (5541911).

Regarding claim 1 and 26, Nilakantan discloses a programmable access device for use in a network access system (Column 2, lines 6 – 9 "remote device"), said programmable access device comprising: first and second network interfaces through which packets are communicated with a network (Column 2, lines 41 – 45); a packet header filter (Column 4, lines 62 – 64) and a forwarding table (Column 6, lines 7 – 9), wherein the forwarding table is utilized to forward packets between the first and second network interfaces (Column 2, lines 43 – 47), and wherein said packet header filter identifies messages received at to one of the first and second network interfaces on which policy-based services are to be implemented and passes identified messages via

a message interface to an external processor included in said network access system (Column 4, lines 46 – 50, where the central router is part of the boundary system for accessing a network) for implementation of the policy-based services by the external processor (Column 2, lines 44 – 47; Column 6, lines 37 – 48; Column 7, lines 41 – 54), wherein said packet header filter passes all other received messages through the packet header filter to another processor (Column 2, lines 25 – 27, where the other packets are passed to the local processor on the remote interface).

Regarding claim 2 and 27, Nilakantan discloses that the packet header filter receives packets directly from the first network interface (Column 9, lines 55 – 64).

Regarding claim 3 and 28, Nilakantan discloses that the packet header filter is a first packet header filter, and wherein the programmable access device further comprises a second packet header filter that receives packets directly from the second network interface (Column 11, lines 28 – 30).

Regarding claim 5 and 30, Nilakantan discloses a policer that polices packets by reference to traffic parameters (Column 11, lines 1 – 4; lines 28 – 30).

Regarding claim 7 and 32, Nilakantan discloses at a least a usage monitor that monitors at least one traffic type (Column 3, lines 44 – 53).

Regarding claim 15 and 39, Nilakantan discloses a control interface through which said packet header filter and said forwarding table are programmed (Column 2, lines 22 – 28).

Regarding claim 16 and 40, Nilakantan discloses at least a programmable monitor that monitors at least one programmed traffic type (Column 3, lines 44 – 53).

Regarding claim 17 and 41, Nilakantan discloses a policer that polices packets by reference to programmed traffic parameters (Column 11, lines 28 – 30).

Regarding claim 22 and 46, Nilakantan discloses a plurality of protocol-specific state machines for a respective plurality of protocol types (Column 8, lines 52 – 62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 21, 29, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilakantan in view of Kloth (6598034).

Regarding claims 4 and 29, Nilakantan does not explicitly indicate that the packet header filter filters packets for service processing based upon protocol information pertaining to protocol layers higher than layer 3. Kloth teaches a system involving packet filter and policies that includes analyzing protocol layers higher than layer 3 (Column 4, lines 27 – 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kloth's teaching on Nilakantan's edge router system in order to better classify packets and have the network perform more efficiently (Column 4, lines 33 – 37).

Regarding claims 21 and 45, Nilakantan does not explicitly indicate that the identified message is a Resource Reservation Protocol (RSVP) message. Kloth teaches that RSVP can be used and identified in an edge router (Column 12, lines 28 –

31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kloth's teaching of RSVP in Nilakantan's system in order to make better use of policy and quality of service by being able to classify packets according to some priority like the RSVP protocol (Column 12, lines 19 – 37).

Claims 6, 8-14, 18, 23-25, 31, 33-38, 42, and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilakantan in view of Gai (6167445) (Applicants IDS).

Regarding claim 50, Nilakantan discloses a device for use in a network access system (Column 2, lines 6 – 9 "remote device") comprising: a first network interface through which packets are communicated with a first network; a second network interface through which packets are communicated with a second network (Column 6, lines 49 – 51); a message interface coupled to an external processor that is configured to implement policy-based services (Column 6, lines 37 – 39; lines 55 – 58; Column 11, lines 1 – 4; lines 28 – 30); first packet header filter coupled to the first network interface and to the message interface, wherein the first packet header filter identifies messages, received from the first network interface, on which policy-based services are to be implemented (Column 4, lines 62 – 64), wherein the first packet header filter passes the identified messages to the external processor via the message interface (Column 2, lines 44 – 47; Column 6, lines 37 – 48; Column 7, lines 41 – 54) and passes all other messages received from the first network interface to the policer (Column 2, lines 25 – 27, where the other packets are passed to the local processor on the remote interface, which has a smart filtering agent); and a second packet header filter, different from the

first packet header filter, coupled to the second network interface (Column 7, lines 1 – 3), wherein the second packet header filter identifies messages, received from the second network interface, on which policy-based services are to be implemented (Column 6, lines 13 – 22), wherein the second packet header filter passes the identified messages to the external processor via the message interface (Column 6, lines 13 – 22) and passes all other messages received from the second network interface (Column 6, lines 58 – 67), but Nilakantan does not explicitly indicate that the policer comprises a marker that marks packets that do not conform with the traffic parameters. Gai teaches a method of identifying packets which do not conform with the traffic parameters and a way to mark those packets (Column 20, lines 2 – 9; Column 4, line 64 – Column 5, line 8) and discarding those packets (Column 20, lines 2 – 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on Nilakantan in order to be able to deal with packets which are labeled in inaccurately and handle them accordingly (Column 4, line 64 – Column 5, line 8).

Regarding claims 6 and 31, Nilakantan does not explicitly indicate that the policer comprises a marker that marks packets that do not conform with the traffic parameters. Gai teaches a method of identifying packets which do not conform with the traffic parameters and a way to mark those packets (Column 20, lines 2 – 9; Column 4, line 64 – Column 5, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on Nilakantan in order to be able to deal with packets which are labeled in inaccurately and handle them accordingly (Column 4, line 64 – Column 5, line 8).

Regarding claims 8 and 33, Nilakantan discloses that there is generated a reporting event for the usage monitor (Column 16, lines 56 – 58; lines 63 – 67), but does not explicity indicate that there is an associated threshold involving traffic types. Gai teaches issuing thresholds for priority queuing and traffic classes (Column 13, lines 15 – 18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of thresholds for traffic types in Nilakantan's system in order to provide a certain quality of service for certain traffic (Column 3, lines 6 – 26).

Regarding claims 9 and 34, Nilakantan in combination with Gai discloses that a reporting interface that communicates the reporting event to an external processor (Nilakantan, Column 16, lines 56 – 58; 63 – 67).

Regarding claims 10 and 35, Nilakantan in combination with Gai discloses that the associated threshold comprises a session activity level threshold (Gai, Column 13, lines 15 – 36).

Regarding claims 11 and 36, Nilakantan in combination with Gai discloses a fault monitor (Nilakantan, Column 16, lines 56 – 58).

Regarding claims 12 and 37, Nilakantan does not explicitly indicate one or more output buffers for outgoing packets. Gai teaches a plurality of output buffers (Column 2, lines 43 – 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on Nilakantan's system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

Regarding claims 13, Nilakantan in combination with Gai discloses a scheduler associated with the one or more output buffers that schedules the transmission of outgoing packets within the one or more output buffers (Gai, Column 10, lines 26 – 27).

Regarding claims 14 and 38, Nilakatan in combination with Gai discloses the scheduler supports multiple quality of service classes (Gai, Column 2, lines 44 – 64; Table, lines 25 – 41).

Regarding claims 18 and 42, Nilakatan in combination with Gai discloses one or more output buffers for outgoing packets and an associated scheduler that transmits the outgoing packets from the one or more output buffers through the second network interface according to a programmed methodology (Column 2, lines 44 – 64; Column 10, lines 26 – 37).

Regarding claims 23 and 47, Nilakantan in combination with Gai discloses said plurality of protocol-specific state machines include a transport control protocol (TCP) state machine that, responsive to a control command, provides preferential treatment to a particular TCP session because Gai discloses the use of user priority which can be given to any packets or session and will be given a higher priority in the queuing process (Gai, Column 2, lines 44 – 57).

Regarding claims 24 and 48, Nilakantan in combination with Gai discloses a reporting interface through which the programmable access device reports state information for active sessions to an external processor (Gai, Column 14, lines 41 – 56).

Regarding claims 25 and 49, Nilakantan in combination with Gai discloses the reporting interface reports the state information for an active session in response to allocation of service to a new external service controller (Column 14, lines 41 – 56).

Claims 19 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilakantan in view of Gibson (6680943).

Regarding claims 19 and 43, Nilakantan does not explicitly indicate that the identified message is a session initiation protocol (SIP) message. Gibson teaches the use of SIP in a monitored network involving edge routers (Column 6, lines 58 – 67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teaching of SIP in Nilakantan's system in order to allow control messages to be transferred over the same communication lines as packets (Column 8, lines 42 – 52).

Claims 20 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilakantan in view of Jorgensen (6452915).

Regarding claims 20 and 44, Nilakantan does not explicitly indicate that the identified message is an Internet Group Multicast Protocol (IGMP) message. Jorgenson teaches the use of IGMP in monitored network (Column 42, lines 34 – 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement IGMP in Nilakantan's system to allow a way of handling multicasting and allow multicasting to help reduce traffic (Column 42, lines 20 – 46).

Response to Arguments

Applicant's arguments filed June 10, 2004 have been fully considered but they are not persuasive. The applicant argues that the reference Nilakantan does not teach "that the Smart Filtering Agent 30 packet header filter 'identifies messages received at one of the first and second network interfaces on which policy-based services are to be implemented and passes identified messages via a message interface to an external processor included in said network access system for implementation of the policy-based services by the external processor' and 'passes all other received messages to an other processor.'" The examiner believes the reference does teach this, because as seen in Column 2, lines 44 – 47; Column 6, lines 37 – 48; and Column 7, lines 41 – 54, the smart filtering agent forwards packets to the central processor that were identified to go the central processor of routing or policy service or alternately the Smart Filtering Agent can decide that the packet does not need to be forwarded onto the central processing router and handles it locally by its own local processor.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (703) 605-0633. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (703) 308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
August 10, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER